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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,347	07/14/2003	F. Paul Silverman	VAL6131P0591US	6353

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WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
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EXAMINER

CLARDY, S

ART UNIT

PAPER NUMBER

1617

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/619,347	Applicant(s) SILVERMAN ET AL.	
	Examiner S. Mark Clardy	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-18 are pending in this application which claims benefit of US Provisional Application 60/433,830, filed December 16, 2002.

Applicants' claims are drawn to herbicidal compositions and methods comprising a photosystem II (PSII) inhibiting herbicide¹ and a salicylate (SA) or other Systemic Acquired Resistance (SAR) inducer².

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 6, 7, 9, and 18 are again rejected under 35 U.S.C. 102(a), and (b) as being anticipated by Klepper³.

Klepper, again, teaches the combination of SA with PSII inhibiting herbicides, i.e., atrazine, bentazon, cyanazine, diuron, metribuzin, norea, phenmedipham, and prometryn (p. 175) in aqueous solution, with the test concentration of the PSII herbicide at 300 ppm or 0.03% (p. 174, "Materials", 2nd para). One of the stated goals was to determine whether SA could act as a synergist (p. 174, 2nd col, lines 1-5). Klepper concludes that while SA does act as a synergist (p. 178), other salicylates may be more persistent and therefore more practical or effective (p. 179).

Applicants argue that Klepper does not anticipate the recited claims because applicant conducted experiments indicating that during certain periods post-spraying, SA and NO appear

¹ Claim 2: atrazine, bentazon

² Claims 10-16: hydroxypicolinic acid, acibenzolar (=BTH), dichloroisonicotinic acid, (di)chlorosalicylic acid compounds

³ Klepper. "Synergistic Levels of Nox Emissions from Soybean Leaves Caused by a Combination of Salicylic Acid and Photosynthetic Inhibitor Herbicides". *Pesticide Biochemistry and Physiology*. 32:173-179. 1988.

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to be antagonistic. Such evidence, however, does not negate the teaching of Klepper that SA and PSII herbicides may be combined; evidence of unexpected results, while useful under 35 USC 103, does not overcome an anticipation rejection under 35 USC 102.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Klepper and Ryals et al⁴.

Klepper has been discussed above. This reference does not appear to address the SAR activating characteristic of SA.

Ryals et al teach that SA, acibenzolar (BTH), and other compounds are known activators of SAR. One of ordinary skill in the art of plant growth regulating compounds would be motivated to substitute the SA of Klepper with a compound such as acibenzolar because Ryals et al teach their equivalent activity in plants as SAR activators.

Thus, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have combined SA or other SAR inducers such as acibenzolar, with PSII inhibiting herbicides such as atrazine or bentazon, because Klepper teaches such compositions, and because SA and acibenzolar are both known signaling molecules which are useful for stimulating SAR in plants. The teachings of the prior art would suggest to the ordinary artisan that the biochemical signaling characteristics of SA and acibenzolar are interchangeable.

⁴ Ryals et al. "Systemic Acquired Resistance". *The Plant Cell*. 8:1809-1819. October 1996.

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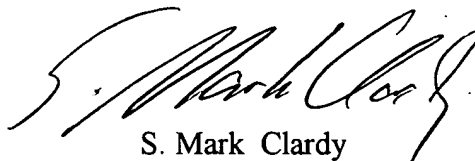
Applicants argue that Klepper and Ryals et al are not combinable because "applicants have shown that potentiation of atrazine by acibenzolar-S-methyl and other salicylates is not SAR dependent and does not work through SAR" (p. 4 of response). The combination of Klepper and Ryals et al was based upon the teachings within these references and does not depend on a showing by applicants. There does appear to be an inconsistency in applicants' argument, however, inasmuch as the claims are specifically drafted as compositions comprising a PSII inhibiting herbicide (such as atrazine, claim 2) and a SAR inducer. It is unclear why an argument based upon the mechanism of action that would result from such a combination would be pertinent to whether the combination itself is patentable. The fact remains that the prior art teaches such combinations.

No unobvious or unexpected results are noted; no claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Mark Clardy
Primary Examiner
Art Unit 1617

May 16, 2005